

Abstract of the Disclosure

METHOD AND APPARATUS FOR PERFORMING TEMPERATURE
COMPENSATION FOR A PAYLOAD MEASUREMENT SYSTEM

The present invention provides a method and apparatus configured to perform relative load compensation for a payload measurement system of a machine. The machine has at least one cylinder for elevating a payload carrier. The cylinder is connected to a fluid circuit having an actuating fluid. The payload measurement system is calibrated. Then a load of unknown weight is lifted. To determine the weight of this load, the system determines an uncompensated payload weight as a function of sensed pressure values of the actuating fluid. A parameter indicative of viscosity, such as temperature, of the actuating fluid is sensed, and this parameter is scaled as a function of the calibrated weight and the uncompensated weight. A payload weight is determined as a function of the scaled parameter, the sensed parameter, and the uncompensated payload weight.